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普及健體運動 — 社區體質測試計劃
Healthy Exercise for All Campaign —
Physical Fitness Test for the Community

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Healthy Exercise for All Campaign — Physical Fitness Test for the Community

「普及健體運動 — 社區體質測試計劃」（簡稱體測計劃）是首個以隨機抽樣方法進行的全港性體質測試，旨在搜集有關香港市民的體質數據。本文概述這個計劃的研究方法，以及部分主要研究結果。

The “Healthy Exercise for All Campaign — Physical Fitness Test for the Community” (the Test) was the first territory-wide physical fitness test conducted by means of random sampling method with a view to collecting data on the physical fitness of Hong Kong people. This article briefly describes the research methodology of the Test and some of its major findings.

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普及健體運動 — 社區體質測試計劃

Healthy Exercise for All Campaign — Physical Fitness Test for the Community

1. 引言

1.1 「普及健體運動 — 社區體質測試計劃」（簡稱體測計劃）是首個以隨機抽樣方法進行的全港性體質測試，旨在搜集有關香港市民的體質數據。除了讓受訪者了解自己的體質狀況，這個計劃亦為建立香港市民體質數據庫提供有用的資料，從而協助政府制定提升市民整體體質的優先措施。

1.2 體測計劃於 2011 年 4 月至 2012 年 1 月進行，由體育委員會轄下社區體育事務委員會成立的「普及健體運動 — 社區體質測試計劃」諮詢委員會督導，並由康樂及文化事務署（康文署）負責統籌。

1.3 體測計劃的內容參考國家體育總局的「國民體質監測工作方案」設計，包括系統化的體質測試和問卷調查兩部分，搜集的資料包括受訪者的人口背景、運動模式、生活方式，以及他們對參與體育活動的態度和對健康問題的認知。

1.4 本文概述體測計劃的研究方法，以及部分主要研究結果。

1. Introduction

1.1 The “Healthy Exercise for All Campaign — Physical Fitness Test for the Community” (the Test) was the first territory-wide physical fitness test in Hong Kong, conducted by means of random sampling method with a view to collecting data on the physical fitness of Hong Kong people. Apart from giving the participants a general understanding of their own physical fitness condition, the Test also aimed to provide useful inputs for setting up a database on the physical fitness of Hong Kong people, which in turn helped the Government develop priority measures to enhance overall physical fitness of the public.

1.2 The Test was carried out from April 2011 to January 2012. It was steered by the Advisory Committee for the “Healthy Exercise for All Campaign — Physical Fitness Test for the Community” set up by the Community Sports Committee under the Sports Commission, and coordinated by the Leisure and Cultural Services Department (LCSD).

1.3 The Test was devised with reference to the China National Fitness Survey conducted by the General Administration of Sport of China. It consisted of standardised physical fitness tests and a survey questionnaire to collect participants’ demographic information, their physical activity patterns, lifestyle as well as their attitude towards physical activity participation and knowledge about health-related issues.

1.4 This article briefly describes the research methodology and some major findings of the Test.

2. 研究方法

涵蓋範圍

2.1 體測計劃涵蓋 3 至 69 歲適合進行系統化體質測試的香港居民（不包括家庭傭工）。不適合參與體測計劃的人士包括：

- 身體發育異常（如侏儒症、巨人症）；
- 身體殘障或殘缺（如失明、失聰）；
- 在過去 1 年，因患病或受傷連續入住醫院 3 天或以上；以及
- 懷孕。

樣本選取及數據搜集

2.2 體測計劃的樣本設計大致分為兩部分：第一部分涵蓋幼稚園學生（3 至 6 歲幼兒）、小學生（7 至 12 歲兒童）和中學生（13 至 19 歲青少年）；第二部分涵蓋 20 至 69 歲的香港居民（包括 20 至 39 歲的年輕成人、40 至 59 歲的中年人和 60 至 69 歲的長者）。

2.3 第一部分樣本的選取方法，是先在 18 個區議會分區隨機抽選幼稚園、小學和中學，然後在中選的學校抽選學生，請他們在校園內完成調查問卷及進行體質測試。至於第二部分的樣本，是以政府統計處備存的屋宇單位清單作為選取基礎。隨機選中的住戶所有合資格家庭成員都獲邀以面談訪問方式在家中完成調查問卷，並稍後在指定的康文署場地進行體質測試。

2. Research methodology

Coverage

2.1 The Test covered Hong Kong residents aged 3 to 69 (excluding domestic helpers) whose physical conditions were suitable for taking part in the standardised physical fitness tests. People with the following conditions were considered unsuitable for the Test :

- Body mal-development (e.g. dwarfism, gigantism);
- Physical handicap or deformity (e.g. blindness, deafness);
- Hospitalised for 3 or more consecutive days due to sickness or injury in the past year; and
- Pregnancy.

Sample selection and data collection

2.2 The Test was broadly divided into two parts in sample design. Part I covered kindergarten students (infants aged 3 to 6), primary school students (children aged 7 to 12) and secondary school students (adolescents aged 13 to 19) while Part II covered Hong Kong residents aged 20 to 69 (including young adults aged 20 to 39, middle-aged adults aged 40 to 59 and the elderly aged 60 to 69).

2.3 Under Part I, kindergartens, primary schools and secondary schools from the 18 District Council districts (DCDs) were selected by means of random sampling method. Samples of students from the selected schools were then drawn to complete questionnaires and perform physical fitness tests at school sites. As for Part II, the frame of quarters maintained by the Census and Statistics Department (C&SD) was adopted as the basis for sample selection. All eligible household members within the randomly selected households were invited to complete a survey questionnaire through face-to-face interview at home as well as taking physical fitness tests at designated LCSD's venues later on.

樣本數量

2.4 在全港 18 個區議會分區隨機抽選約 13 000 位人士中，有效樣本（即完成問卷調查及體質測試者）約為 8 200 個。圖 1 顯示這些樣本的年齡分布。

加權

2.5 為使研究結果更能反映香港人口的實際年齡性別分布，每個年齡及性別組別的數據均進行加權處理。加權因子根據政府統計處公布的 2011 年年中香港人口臨時數字計算。

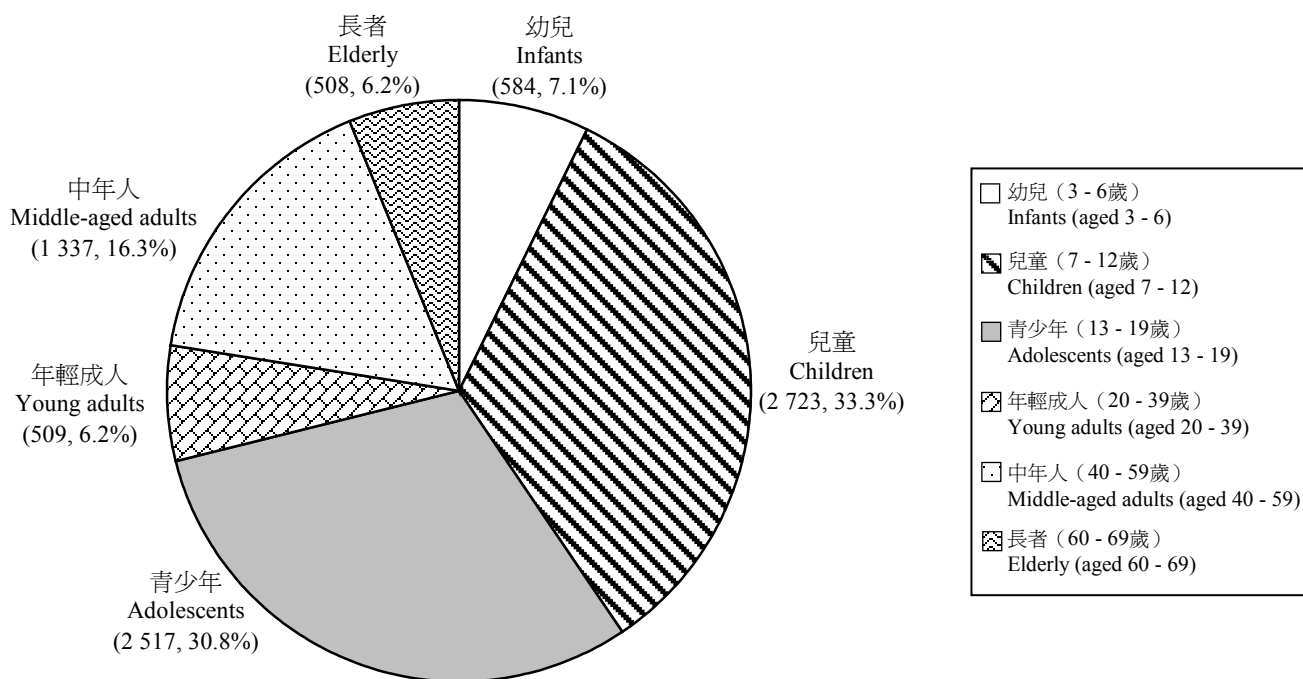
Sample size

2.4 Some 8 200 valid samples (i.e. persons who completed both survey questionnaire and physical fitness tests) were collected from about 13 000 randomly selected persons in 18 DCDs of Hong Kong. Age distribution of these samples is shown in Chart 1.

Weighting

2.5 Weighting adjustments were applied to data of different age groups and genders so that the findings of the Test would reflect the actual age-sex distribution of the Hong Kong population. The weighting factors were calculated based on the mid-2011 population figures (provisional) released by the C&SD.

圖1 按年齡組別劃分的有效樣本數目
Chart 1 Number of valid samples by age group



註釋：由於四捨五入關係，百分比數字加起來不等於 100%。

Note: Figures on percentage shares do not add up to 100% due to rounding.

3. 體測計劃的主要研究結果

體重狀況

3.1 體測計劃根據受訪者的身高和體重計算其體質指數¹，再把得出的體質指數分為四個組別²（即過輕、正常、過重和肥胖），以評估受訪者的體重狀況。

3.2 體重過輕可能與遺傳、營養不良、疾病或心理因素有關。各個年齡組別都有體重過輕的情況。這情況在幼兒（19.4%）和青少年（18.2%）兩組相當明顯。換言之，在這兩個年齡組別裏，估計差不多每五個人就有一人體重過輕。（表1）

3.3 至於另一健康問題—過重／肥胖，可由不健康飲食習慣和缺乏運動引致，而此問題一般會隨年齡增長而加劇。長者中分別有24.0%及37.5%屬於過重或肥胖，即逾六成長者有這健康問題。（表1）

3.4 比較各年齡組別的男女，體測計劃結果顯示大部分組別男性過輕的比例均較女性為低，情況以年輕成人最為明顯（男性：6.8%；女性：14.0%）。過重／肥胖的情況則相反。除了幼兒外，其他年齡組別男性過重及肥胖的比例都較女性為高，情況以年輕成人最為明顯，男性（54.1%）與女性（25.9%）的比例相差高達28.2個百分點。（表2）

¹ 體質指數 = 體重 (千克) ÷ [身高 (米)]²

² 成年人體重狀況的分級如下：

過輕：體質指數 < 18.5

正常：18.5 ≤ 體質指數 < 23

過重：23 ≤ 體質指數 < 25

肥胖：體質指數 ≥ 25

幼兒、兒童和青少年的體重狀況沒有劃一的分級標準，其過輕、正常、過重及肥胖的分級會因年齡及性別而有所不同。

3. Major findings of the Test

Weight status

3.1 Using participants' height and weight obtained from the Test, their Body Mass Index (BMI)¹ was derived and categorised into four classes² (i.e. underweight, normal, overweight and obese) for assessing their weight status.

3.2 Underweight, which may be related to genetics, under-nutrition, illness or psychological factors, was found in various age groups. This issue was rather noticeable in infants (19.4%) and adolescents (18.2%). In other words, almost 1 in 5 persons of these two age groups were estimated to be underweight. (Table 1)

3.3 As for another health issue viz. overweight/obese, which may be induced by unhealthy dietary habits and physical inactivity, it was generally on the increase as age advanced. For the elderly, 24.0% and 37.5% of them were classified as overweight and obese respectively, representing that over 60% of them were faced with this health issue. (Table 1)

3.4 Comparing male and female in the different age groups, the Test revealed that the proportions of underweight for male were lower than those for female in most of the age groups, particularly young adults (6.8% for male versus 14.0% for female). As for overweight/obese, the situation was reverse. Except for infants, the proportions of overweight and obese for male were higher than those for female in all other age groups. This phenomenon was particularly prominent among young adults, whereby the difference between male's proportion (54.1%) and female's proportion (25.9%) was as high as 28.2 percentage points. (Table 2)

¹ BMI = Body weight (kg) ÷ [Height (m)]²

² Weight status classification for **adults** is as follows:

Underweight: BMI < 18.5

Normal: 18.5 ≤ BMI < 23

Overweight: 23 ≤ BMI < 25

Obese: BMI ≥ 25

There are no definite criteria on weight status classification for infants, children and adolescents. The classifications of underweight, normal, overweight and obesity are varying based on different age and sex.

表1 按年齡組別劃分的體重狀況
Table 1 Weight status by age group

	過輕 Underweight (%)	正常 Normal (%)	過重 Overweight (%)	肥胖 Obese (%)	總計 Total (%)
幼兒 Infants	19.4	67.1	9.3	4.2	100.0
兒童 Children	8.8	64.3	19.5	7.4	100.0
青少年 Adolescents	18.2	67.8	10.3	3.7	100.0
年輕成人 Young adults	10.9	51.2	15.9	22.1	100.0
中年人 Middle-aged adults	2.8	40.3	23.8	33.1	100.0
長者 Elderly	4.2	34.4	24.0	37.5	100.0

註釋：由於四捨五入關係，個別數字加起來可能不等於100%。

Note: Figures may not add up to 100% due to rounding.

表2 按性別及年齡組別劃分的體重狀況
Table 2 Weight status by gender and age group

	過輕 Underweight		正常 Normal		過重 Overweight		肥胖 Obese	
	男 Male (%)	女 Female (%)	男 Male (%)	女 Female (%)	男 Male (%)	女 Female (%)	男 Male (%)	女 Female (%)
幼兒 Infants	19.3	19.5	67.8	66.4	7.5	11.2	5.5	2.9
兒童 Children	7.8	9.9	61.5	67.2	20.5	18.3	10.1	4.5
青少年 Adolescents	15.5	21.0	66.1	69.6	13.2	7.4	5.3	2.1
年輕成人 Young adults	6.8	14.0	39.1	60.1	19.3	13.3	34.8	12.6
中年人 Middle-aged adults	2.1	3.5	31.4	48.1	26.2	21.7	40.3	26.7
長者 Elderly	5.4	3.0	31.7	37.1	28.7	19.1	34.2	40.8

註釋：由於四捨五入關係，個別數字加起來可能不等於100%。

Note: Figures may not add up to 100% due to rounding.

中央肥胖

3.5 除體質指數外，量度腰圍是評估成年人及長者是否過重或肥胖的另一方法。男性和女性的腰圍如分別超過 90 厘米和 80 厘米，便屬於中央肥胖。

3.6 中央肥胖的人數比例隨年齡增加，這與 3.3 段所述過重／肥胖的情況相似。此外，女性中央肥胖的比例較男性上升得快。就長者而言，33.1%的男士和 55.1%的女士屬於中央肥胖。（表 3）

Central obesity

3.5 Apart from BMI, another method to assess whether adults and elderly are overweight or obese is measuring waist circumference. A waist circumference over 90 cm for male or 80 cm for female is considered as central obesity.

3.6 Similar to overweight/obese as mentioned in paragraph 3.3, the proportion of central obesity increased as age advanced. Besides, it was observed that the increase in proportion of central obesity for female was more rapidly than male's. For the elderly, 33.1% of men and 55.1% of women were facing central obesity. (Table 3)

表3 按性別及年齡組別劃分的中央肥胖情況
Table 3 Prevalence of central obesity by gender and age group

	男 Male (%)	女 Female (%)	總體 Overall (%)
年輕成人 Young adults	22.2	10.8	15.7
中年人 Middle-aged adults	31.4	32.7	32.1
長者 Elderly	33.1	55.1	44.0

高血壓

3.7 體測計劃亦反映各年齡組別人士患高血壓³的情況。高血壓可增加中風、心臟病，以及早逝的機會。

3.8 確定患高血壓的兒童和青少年少於 5%。患高血壓的情況隨年齡遞增，長者患高血壓的比例急升至 37.6%，換言之，超過三分之一的長者有這健康問題。（表 4）

Hypertension

3.7 The Test also unveiled the prevalence of hypertension³, which may increase the chance of having a stroke, heart attack and early death, amongst different age groups.

3.8 For children and adolescents, less than 5% of them were identified with hypertension. Following the advance in age, hypertension became more prevalent. The proportion of having hypertension surged to 37.6% for the elderly. In other words, more than one-third of the elderly encountered this health issue. (Table 4)

³ 高血壓是指靜態心縮壓 ≥ 140 毫米水銀柱或／及靜態心舒壓 ≥ 90 毫米水銀柱。

³ Hypertension refers to resting systolic blood pressure ≥ 140 mmHg or/and resting diastolic blood pressure ≥ 90 mmHg.

3.9 按性別分析，患高血壓的男童（4.2%）和女童（4.1%）比例差不多。但在其他年齡組別中，兩性患高血壓的比例有明顯差異，男性患高血壓的比例普遍較女性為高。（表4）

3.9 Analysed by gender, the percentage of having hypertension for male children (4.2%) and that for female children (4.1%) were more or less the same. However, obvious differences in percentage of having hypertension between male and female were observed in other age groups. In general, male's percentages of having hypertension were higher than those of female. (Table 4)

表4 按性別及年齡組別劃分的患高血壓情況
Table 4 Prevalence of hypertension by gender and age group

	男 Male (%)	女 Female (%)	總體 Overall (%)
兒童 Children	4.2	4.1	4.1
青少年 Adolescents	7.5	1.2	4.4
年輕成人 Young adults	16.4	6.3	10.6
中年人 Middle-aged adults	29.0	19.4	23.9
長者 Elderly	40.0	35.1	37.6

體能活動量

3.10 「體能活動量基礎指標」（簡稱基礎指標）用作評估 7 歲或以上受訪者的體能活動量。根據基礎指標，1 星期有至少 3 天、每天累積達 30 分鐘中等或以上強度體能活動量的人士屬於「活躍」。

3.11 體測計劃結果顯示，7 歲或以上受訪者的體能活動量隨年齡增加而減少。「活躍」受訪者的比例由兒童的 51.8%，逐漸減至長者的 36.5%。（表 5）

Physical activity participation

3.10 “Physical Activity Baseline Indicator” (“Baseline Indicator”) was used to classify the physical activity participation level of participants aged 7 or above. In accordance with the Baseline Indicator, people who participated in physical activity of moderate-or-above intensity at least 3 days a week with accumulation of 30 minutes or above per day are classified as “active”.

3.11 The Test revealed that physical activity participation level of participants aged 7 or above was on the decrease with the advance in age. The proportion of “active” participants gradually decreased from 51.8% in children to 36.5% in the elderly. (Table 5)

3.12 按性別分析，男性無論在兒童、青少年還是年輕成人階段，普遍都較女性活躍。不過，這情況隨年齡增加而逆轉。在長者組別中，「活躍」女性的比例（38.4%）略高於男性（34.6%）。（表5）

3.12 Analysed by gender, males were generally more active than females at the stages of children, adolescent and young adult. Following the increase in age, inverse situation was seen. For the elderly, the “active” proportion of female (38.4%) was slightly higher than that of male (34.6%). (Table 5)

表5 按性別及年齡組別劃分為「活躍」受訪者的比例
Table 5 Proportion of participants classified as “active” by gender and age group

	男 Male (%)	女 Female (%)	總體 Overall (%)
兒童 Children	54.7	48.7	51.8
青少年 Adolescents	50.1	34.2	42.3
年輕成人 Young adults	49.3	28.1	37.1
中年人 Middle-aged adults	36.8	37.5	37.2
長者 Elderly	34.6	38.4	36.5

3.13 那些「不活躍」的受訪者表示「缺乏時間」、「沒興趣」、「疲倦」、「天氣差」及「懶惰」是他們不參與體能活動的主要原因。

3.13 Among those who claimed themselves as “not active”, the major reasons for not undertaking physical activities were “lack of spare time”, “lack of interest”, “tiredness”, “inclement weather” and “laziness”.

喜愛的體能活動

Favourite physical activities

3.14 幼兒最喜愛的體能活動是「在遊樂場玩耍」；兒童和青少年較喜歡「球類活動」；年輕成人最常參與「球類活動」和「跑步／慢跑」；年紀較長人士最喜愛「步行」。（表6）

3.14 The most popular physical activity among infants was “playing in playground”. Children and adolescents preferred “ball games”. As for young adults, the most frequently engaged activities were “ball games” and “running/jogging”. “Walking” topped the list of favourite physical activities among the elderly. (Table 6)

表6 按性別及年齡組別劃分的首三項最喜愛的體能活動⁽¹⁾
Table 6 Top three favourite physical activities⁽¹⁾ by gender and age group

		男 Male (%)	女 Female (%)	總體 Overall (%)
幼兒 Infants	在遊樂場玩耍 Playing in playground	80.4	80.4	80.4
	游泳 Swimming	49.7	40.6	45.3
	球類活動 Ball games	44.4	13.8	29.7
兒童 Children	球類活動 Ball games	81.4	53.7	68.1
	游泳 Swimming	43.9	53.9	48.8
	田徑 Track and field	49.4	34.1	42.0
青少年 Adolescents	球類活動 Ball games	83.4	66.5	75.1
	溜冰或滾軸溜冰 Ice skating / Roller skating	14.2	35.7	24.8
	游泳 Swimming	23.5	25.9	24.7
年輕成人 Young adults	球類活動 Ball games	52.8	30.0	40.4
	跑步／慢跑 Running / Jogging	42.2	32.4	36.9
	步行 Walking	15.5	32.4	24.7
中年人 Middle-aged adults	步行 Walking	30.5	40.3	35.5
	跑步／慢跑 Running / Jogging	35.9	18.3	26.8
	行山 Hiking	21.7	25.6	23.7
長者 Elderly	步行 Walking	55.2	47.9	51.4
	行山 Hiking	22.1	20.5	21.3
	太極 Tai Chi	12.3	23.7	18.3

註釋：(1)受訪者最多可選擇三個項目。

Note: (1) Respondents were allowed to choose three types of physical activity at the most.

體質水平

3.15 體測計劃的整體研究結果顯示，所有年齡組別的男性體質普遍較女性為佳。成年後，隨年齡增加，兩性的體質水平皆顯著下降，出現各種健康問題（包括肥胖、高血壓和低心肺耐力）的風險亦增加。此外，女性體質衰弱的速度較男性快。

3.16 此外，研究發現體質水平與體能活動量有一定關係，而生活習慣如觀看電子顯示屏的時間、睡眠時間、父母的體能活動參與率、教育程度等，亦與體質水平有不同程度的關係。

4. 總結

4.1 體測計劃研究結果顯示，本港大部分市民（無論老幼）的體能活動量，均未達足以維持身體健康的水平。日後進行的全港性體質測試計劃將有助了解市民在運動模式與體質方面的變化。

Physical fitness level

3.15 The overall findings of the Test revealed that males generally performed better than females in all age groups in terms of physical fitness level. After reaching adulthood, both genders registered significant drop in fitness level and increase in exposure to various health risks (including obesity, hypertension and low cardiovascular fitness) as age increased. Meanwhile, females' fitness was found to have diminished much faster than males'.

3.16 In addition, it was found that physical fitness level was correlated to physical activity participation to a certain degree. Moreover, a different degree of correlation was observed between physical fitness level and living habits such as time spent on screen activities, sleeping time, parents' participation rate of physical activity and education attainment.

4. Conclusion

4.1 The Test results indicated that the majority of the general public (be they children or the elderly) did not undertake sufficient physical activities to maintain good health. Territory-wide physical fitness tests will continue to be conducted in the future to help keep track the changes in people's physical activity pattern and their physical fitness level.